REMARKS / ARGUMENTS

The Amendments

Claims 1 and 15 have been amended to specify that the tab fills 80% or more of the slit. Support is found, e.g., in the partial paragraph at the top of page 10, which discloses that: "tab 100 also effectively fills the joint gap found in prior art joints. In different embodiments, the tab fills greater than or equal to about 80%, . . . of the width of the joint gap." Support is also found at page 8, lines 26-28, which discloses that: "disc 80 effectively fills the gap found in prior art joints in which a spring-topped eyebolt only (no disc) is used to pivotally attach a ball limb member to a socket limb member." Method claims 29-34 have been cancelled without prejudice. No new matter has been added by these amendments. These amendments are not made for purposes of patentability, but rather to expedite prosecution.

The Telephone Interview

The Examiner is thanked for the courtesy of a telephone interview on October 23, 2007. The amendments to the claims were discussed, and it was agreed that there was support in the specification for the amendment specifying that the tab fills 80% or more of the slit. The Examiner pointed out that the hook of Tseng might be viewed as a tab, and the undersigned pointed out that even so, it did not fill 80% or more of the gap. The Examiner requested that arguments be presented as to why the hook of Tseng could not be considered to fill the gap, and additionally to present arguments for non-obviousness to overcome the obviousness standard articulated in *KSR International Co.* v. *Teleflex Inc.* This has been done

The Rejections Under 35 U.S.C. 103

The Rejections over Tseng in view of Rice

Claims 1-3, 9-14, have been rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Tseng (US 6,024,261) in view of Rice (US 2,108,927). The Office Action states that Tseng discloses a joint structure comprising all the elements of claim 1 except the friction-producing assembly, which is taught by Rice. The Office Action

also alleges (with respect to claim 14 hereof) that Tseng in view of Rice results in a joint structure for joining limb members of a mannequin wherein the tab effectively fills the slit, and that this is shown in any of the Figures (presumably any of the Figures of Tseng).

It is noted that although the Office Action identifies hook 33 of Tseng as a tab, it is submitted that this hook would not be identified by one of skill in the art as a "tab." Certainly, the hook of Tseng is not shown as filling the slit in the Figures of Tseng. (Nor does Rice show a tab that fills a space into which it is placed.) There is no motivation in any of the references to provide a hook that fills a joint space. The problem of providing a natural-looking joint was discovered by Applicants and is part of this invention rather than part of the prior art. Certainly Tseng does not show any attempt to provide a natural-looking lower arm below the ball portion of the joint, nor does it show any attempt to provide natural-looking finger joints. Rice also fails to show natural-looking joints, the gap, for example, in the Rice knee joint is quite evident.

Nevertheless, to expedite prosecution, claims 1 and 15 have been amended to specify that the tab fills 80% more of the slit. The hook of Tseng does not fill 80% or more of the slit. The Rice disclosure similarly does not teach a tab that fills 80% more of the space into which it is inserted. It is therefore submitted that claims 1 and 15 are allowable over Tseng in view of Rice. Claims 2-14 are dependent on claim 1 and claims 16-28 are dependent on claim 15, and these dependent claims are therefore also allowable.

Please note that the recently published Examination Guidelines for Determining Obviousness Under 35 U.S.C. 103 in View of the Supreme Court Decision in *KSR International Co.* v. *Teleflex Inc.,* Federal Register, Vol. 72, No. 195, Wednesday, October 10, 2007, lists the following approved rationales for finding that a claimed invention is obvious:

(A) Combining prior art elements according to known methods to yield predictable results; **[In the present instance, a tab on one part of a manikin that fills at least 80% of a gap in another part of a manikin is not an element of the cited art.]**

(B) Simple substitution of one known element for another to obtain predictable results; **[Again, the tab that fills at least 80% of a gap is not a previously-known element.]**

(C) Use of known technique to improve similar devices (methods, or products) in the same way; **[Here again, use of a tab that fills at least 80% of a gap was not previously known.]**

(D) Applying a known technique to a known device (method, or product) ready for improvement to yield predictable results; **[Here again, use of a tab that fills at least 80% of a gap was not previously known.]**

(E) "Obvious to try"—choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success; **[However, identified, predictable solutions cannot be chosen unless the problem to be solved is known. In this instance, the problem to be solved was discovered by the inventors, and was not previously known, the problem being an unnatural looking slot, or gap, on the ball section of prior art joints, and poor anatomical shape of the limb. (Specification, page 2, lines 16-20).]**

(F) Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations would have been predictable to one of ordinary skill in the art; **[Here again, use of a tab that fills at least 80% of a gap was not previously known.]**

(G) Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings

to arrive at the claimed invention. **[Use of a tab that fills at least 80% of a gap was not previously known, suggested or taught.]**

Thus, the KSR rationales for a finding of obviousness do not apply to the present claims, and withdrawal of the rejections is respectfully requested.

The Rejections over Tseng and Rice in view of Harris

Claims 15,16,21-28 have been rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Tseng (US 6,024,261) in view of Rice (US 2,108,927) and Harris (US 3,383,962).

Note that claim 15 is identical to claim 1 except for the recitation in claim 15 of one or more surface depressions on the tab. Tseng and Rice are cited for disclosing the same elements of claim 15 as set forth above with respect to claim 1, except for a tab having one or more surface depressions. Harris is cited for teaching a tab having one or more surface depressions. As pointed out above, the combination of Tseng and Rice do not disclose or suggest a tab that fills 80% more of the slit. Harris does not supply this deficiency. Harris discloses a ratchet wrench rather than a manikin joint structure having a ball and socket. In addition, the detents of Harris would be more accurately described as grooves between teeth (Figure 2A, element 24) than surface depressions as specified in the claims hereof. It is therefore submitted that claim 15 is allowable over the cited combination of Tseng and Rice in view of Harris. It is also submitted that Harris is nonanalogous art and not properly cited as relevant to solving problems in the manikin arts. Claims 16, and 21-28 are dependent on claim 15 and therefore are also allowable.

Please note that the KSR rationales do not apply to this combination of reference because Harris fails to show that the use of a tab that fills 80% of a gap was known to the art prior to this invention.

The Rejections over Tseng and Rice in view of Berman

Claims 15, 16, 21-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tseng (US 6,024,261) in view of Rice (US 2,108,927) and Berman (US 5,800,243). The Office Action cites Tseng and Rice as above for disclosing the same elements of claim 15 as set forth above, except for a tab having one or more surface depressions. Berman is cited for teaching the use of a tab (29) having one or more surface depressions (41), for the purpose of allowing detent engagement to retain a selected position of the limb members and produce sound when the limbs are moved. Accordingly, the Office Action alleged it was obvious to one of ordinary skill in the art at the time of applicant's invention to modify the arrangement of Tseng to include surface depressions in the tab, for the purpose of retaining selected positions of the limb members and produce sound when the limbs are moved as taught by Berman.

As pointed out above, the combination of Tseng and Rice do not disclose or suggest a tab that fills 80% more of the slit as specified in claim 15. Berman does not supply this deficiency. It does not teach a ball and socket arrangement having a slit in the ball portion nor a tab that fits into such a slit. Further, the features identified in the Office Action as surface depressions appear to be more accurately described as grooves between teeth. Berman teaches against the use of mere surface depressions, since it relies on the teeth being prominent to make the desirable clicking sound (see col. 3, lines 31-35). Mere surface depressions as claimed herein would not serve this purpose. It is therefore submitted that claim 15 is allowable over the cited combination of Tseng and Rice in view of Berman. Claims 16 and 21-28 are dependent on claim 15 and therefore are also allowable.

Please note that the KSR rationales presented above do not apply to this combination of reference because Berman fails to show that the use of a tab that fills 80% of a gap was known to the art prior to this invention.

The Rejections over Sanders in view of Rice and Tseng

Claims 1-3 and 9-14, have been rejected under 35 U.S.C. 103(a) as being unpatentable over Sanders (WS 235,300) in view of Rice (US 2,108,927) and Tseng (US 6,024,261). The Office Action states:

> Regarding claim 1, Sanders discloses a joint structure for joining limb members of a mannequin comprising a ball portion (e) formed at the joining end of a first limb member (a), the ball portion having a surface and a slit (A) formed therein, a socket portion (d) formed at the joining end of a second limb member (b), the ball portion being at least partially inserted into the socket portion, the socket portion being sized and shaped to closely fit the ball portion inserted therein and the interior surface of the socket portion having a tab (B) attached thereto said tab being adapted to be received by the slit and pivotally attached to said first limb member. Sanders fails to disclose a friction-producing assembly fixture recessed within the first limb member and in contact with said tab.

Rice is again cited for teaching a friction-producing assembly fixture. The Office Action continues:

> Sanders fails to disclose that the distance between the interior surface of the socket portion and the surface of the ball portion is substantially uniform for the entire ball portion that is inserted within the socket portion. Tseng teaches a joint structure in which the distance between the interior surface of the socket portion (21) and the surface of the ball portion (31) is substantially uniform for the entire ball portion that is inserted within the socket portion for the purpose of allowing secure sliding engagement between the limb members. Accordingly, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify the arrangement of Sanders such that the distance between the interior surface of the socket portion and the surface of the ball portion is substantially uniform for the entire ball portion that is inserted within the socket portion for the purpose of allowing secure sliding engagement between the limb members as taught by Tseng.

However, none of the references teach or suggest a ball joint in which a tab 80% or more fills a slit in a ball joint. Note that the tab (tenon B) in the Sanders joint (best seen in Figure 2), appears to fill less than half the space (mortice A) of the lower leg portion into which it is fitted. The same is true of Rice and Tseng as discussed above. The hook of Tseng does not fill 80% or more of the slit. The Rice disclosure similarly does not teach a tab that fills 80% more of the space into which it is inserted. Thus claim 1 is

allowable over the combination of Sanders with Rice and Tseng. In addition, claims 2-3 and 9-14 are dependent on claim 1 and are therefore allowable because claim 1 is allowable.

Please note that the KSR rationales presented above do not apply to this combination of reference because Sanders fails to show that the use of a tab that fills 80% of a gap was known to the art prior to this invention.

The Rejections over Sanders in view of Rice, Harris and Tseng

Claims 15,16 and 21-28 have been rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Sanders (US 235,300) in view of Rice (US 2,108,927), Harris (US 3,383,962) and Tseng (US 6,024,261).

Sanders and Rice are cited for disclosing the same elements of claim 15 as these references were cited for disclosing with regard to claim 1 in the previous rejection. Rice was again cited for teach the use of a friction-producing assembly. Harris was cited for allegedly teaching surface depressions in the tab, and Tseng was again cited for teaching a joint structure in which the distance between the interior surface of the socket portion and the surface of the ball portion is substantially uniform for the entire ball portion that is inserted within the socket portion. As discussed above, none of these references teach a ball joint in which a tab 80% or more fills a slit in a ball joint as is now specified in claim 15. Claim 15 is therefore allowable over this combination of references, and as claims 16 and 21-28 are dependent on claim 15, they are also allowable over these references.

Please note that the KSR rationales presented above do not apply to this combination of reference because none of them shows that the use of a tab that fills 80% of a gap was known to the art prior to this invention.

Request for Rejoinder

Rejoinder of withdrawn claims 4-8 and 17-20 is respectfully requested. Claims 4-8 are dependent on allowable claim 1 and therefore contain all the limitations thereof; claims 17-20 are dependent on allowable claim 15 and therefore contain all the limitations thereof. Therefore rejoinder of these claims is proper.

Conclusion

In view of the foregoing, it is submitted that this case is in condition for allowance, and passage to issuance is respectfully requested. If there are further issues related to patentability, the courtesy of a telephone interview is requested, and the Examiner is invited to call to arrange a mutually convenient time.

It is believed that this amendment does not necessitate the payment of any fees. A Request for Continued Examination accompanies this response, together with the appropriate fee. If the fee submitted is incorrect, however, please deduct from Deposit Account No. 07-1969 the appropriate fee for this submission and for any extension of time required.

Respectfully submitted,

/ellenwinner/

Ellen P. Winner
Registration No. 28,547

GREENLEE, WINNER AND SULLIVAN, P.C.
4875 Pearl East Circle, Suite 200
Boulder, CO 80301
Telephone (303) 499-8080
Facsimile: (303) 499-8089
Email: winner@greenwin.com
Attorney Docket No.: 17-01A